

§ 25.973

14 CFR Ch. I (1–1–06 Edition)

§ 25.973 Fuel tank filler connection.

Each fuel tank filler connection must prevent the entrance of fuel into any part of the airplane other than the tank itself. In addition—

- (a) [Reserved]
- (b) Each recessed filler connection that can retain any appreciable quantity of fuel must have a drain that discharges clear of each part of the airplane;
- (c) Each filler cap must provide a fuel-tight seal; and
- (d) Each fuel filling point must have a provision for electrically bonding the airplane to ground fueling equipment.

[Doc. No. 5066, 29 FR 18291, Dec. 24, 1964, as amended by Amdt. 25–40, 42 FR 15043, Mar. 17, 1977; Amdt. 25–72, 55 FR 29785, July 20, 1990; Amdt. 25–115, 69 FR 40527, July 2, 2004]

§ 25.975 Fuel tank vents and carburetor vapor vents.

(a) *Fuel tank vents.* Each fuel tank must be vented from the top part of the expansion space so that venting is effective under any normal flight condition. In addition—

- (1) Each vent must be arranged to avoid stoppage by dirt or ice formation;
- (2) The vent arrangement must prevent siphoning of fuel during normal operation;
- (3) The venting capacity and vent pressure levels must maintain acceptable differences of pressure between the interior and exterior of the tank, during—
 - (i) Normal flight operation;
 - (ii) Maximum rate of ascent and descent; and
 - (iii) Refueling and defueling (where applicable);
- (4) Airspaces of tanks with interconnected outlets must be interconnected;
- (5) There may be no point in any vent line where moisture can accumulate with the airplane in the ground attitude or the level flight attitude, unless drainage is provided; and
- (6) No vent or drainage provision may end at any point—
 - (i) Where the discharge of fuel from the vent outlet would constitute a fire hazard; or
 - (ii) From which fumes could enter personnel compartments.

(b) *Carburetor vapor vents.* Each carburetor with vapor elimination connections must have a vent line to lead vapors back to one of the fuel tanks. In addition—

- (1) Each vent system must have means to avoid stoppage by ice; and
- (2) If there is more than one fuel tank, and it is necessary to use the tanks in a definite sequence, each vapor vent return line must lead back to the fuel tank used for takeoff and landing.

§ 25.977 Fuel tank outlet.

(a) There must be a fuel strainer for the fuel tank outlet or for the booster pump. This strainer must—

- (1) For reciprocating engine powered airplanes, have 8 to 16 meshes per inch; and
 - (2) For turbine engine powered airplanes, prevent the passage of any object that could restrict fuel flow or damage any fuel system component.
- (b) [Reserved]
- (c) The clear area of each fuel tank outlet strainer must be at least five times the area of the outlet line.
- (d) The diameter of each strainer must be at least that of the fuel tank outlet.
- (e) Each finger strainer must be accessible for inspection and cleaning.

[Amdt. 25–11, 32 FR 6913, May 5, 1967, as amended by Amdt. 25–36, 39 FR 35460, Oct. 1, 1974]

§ 25.979 Pressure fueling system.

For pressure fueling systems, the following apply:

- (a) Each pressure fueling system fuel manifold connection must have means to prevent the escape of hazardous quantities of fuel from the system if the fuel entry valve fails.
- (b) An automatic shutoff means must be provided to prevent the quantity of fuel in each tank from exceeding the maximum quantity approved for that tank. This means must—
 - (1) Allow checking for proper shutoff operation before each fueling of the tank; and
 - (2) Provide indication at each fueling station of failure of the shutoff means to stop the fuel flow at the maximum quantity approved for that tank.